

L O T H I N G L A N D R U R A L D I S T R I C T

C O U N C I L

ANNUAL REPORT OF THE
MEDICAL OFFICER OF HEALTH
AND THE
PUBLIC HEALTH INSPECTOR
FOR THE YEAR
1969

COUNCIL OFFICES,
RECTORY ROAD,
LOWESTOFT.

MEDICAL OFFICER OF HEALTH: A.C. GEE, M.R.C.S., L.R.C.P., D.P.H.

PUBLIC HEALTH INSPECTOR,
PUBLIC CLEANSING OFFICER
and PETROLEUM OFFICER : G.J.L. HORNE, M.A.P.H.I., A.I.P.H.E.

ADDITIONAL PUBLIC HEALTH
INSPECTOR : M. STEER, M.A.P.H.I.

MEAT INSPECTOR and
TECHNICAL OFFICER : S.C. BAKER, A.R.S.H., M.A.M.I.

CLERICAL ASSISTANT : MISS P. WALTON.

GENERAL FOREMAN : A.B. BURCH.

Council Offices,
Rectory Road,
LOWESTOFT.

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present the Annual Report on the health of your District for the year 1969.

The Registrar General's estimate of the population shows a further increase of nearly a thousand persons. The number of inhabited houses has gone up by nearly five hundred. These are quite substantial increases. The total number of births was 339, compared with 342 the previous year, a very slight fall. The increase in population therefore must be assumed to be due to people moving into the District for residential purposes. This, together with the increased number of houses, shows that the District is progressing at a very satisfactory rate.

The Adjusted Birth rate is just slightly lower than last years, as one would expect from the lower number of births, but continues to be well above the national average for England and Wales as a whole, which again indicates that the District is well balanced between younger and older persons. Further evidence of this characteristic is the fact that the Adjusted Death rate of 10.2 is well below the national average.

The causes of death follow closely the national trend, cancer and diseases of the heart being the main causes of death.

The bulk of the notifications of infectious diseases were those of measles. Immunisation against this infectious fever ran into numerous difficulties which it is hoped will shortly be overcome so that greater progress can be made in erradicating what is now more or less the only infectious disease of children which still reaches epidemic proportions in this country.

May I take this opportunity, Mr. Chairman, of thanking you and the members of the Health Committee for the interest you have shown in the work of the Health Department throughout the year.

I have the honour to be
Your obedient Servant,

ARTHUR C. GEE,
Medical Officer of Health.

July, 1970.

GENERAL STATISTICS

Area: 44,675 acres (Census 1961)

Population 1969: 21,610 (as estimated by the Registrar-General)

Population, Census 1961: 16,034

Number of inhabited houses at 31st December, 1969: 7,885

Rateable Value as at 31st December, 1969: £673,142

EXTRACTS FROM VITAL STATISTICS

	LOTHINGLAND					England and Wales rates
	Total	Male	Female	Crude rate	Adjusted rate	
Live births -						
legitimate	323	164	159	-	-	-
illegitimate	16	6	10	-	-	-
total	339	170	169	-	-	-
Live birth rate per 1,000 population	-	-	-	15.7	19.0	16.3
Still births -						
legitimate	4	2	2	-	-	-
illegitimate	1	1	-	-	-	-
total	5	3	2	-	-	-
Still birth rate per 1,000 live and still births	-	-	-	15.0	-	13.0
Total live and still births	344	173	171	-	-	-
Infant deaths -						
under 1 year	2	1	1	-	-	-
under 4 weeks	2	1	1	-	-	-
under 1 week	-	-	-	-	-	-
legitimate	4	2	2	-	-	-
illegitimate	-	-	-	-	-	-
total	4	2	2	-	-	-
Infant mortality rate per 1,000 live births	-	-	-	6.0	-	18.0
Neonatal (under 4 weeks) mortality rate per 1,000 live births	-	-	-	6.0	-	12.0
Perinatal mortality rate (stillbirths and deaths under 1 week) per 1,000 total live and still births	-	-	-	15.0	-	23.0
Deaths from all causes	210	109	101	-	-	-
Death rate per 1,000 population	-	-	-	9.7	10.2	11.9

CAUSES OF DEATH

	<u>Total</u>	<u>Male</u>	<u>Female</u>
Other tuberculosis, incl. late effects	1	-	1
Other infective and parasitic diseases	1	-	1
Malignant neoplasm, oesophagus	2	2	-
Malignant neoplasm, stomach	3	1	2
Malignant neoplasm, intestine	5	-	5
Malignant neoplasm, lung, bronchus	8	7	1
Malignant neoplasm, breast	3	-	3
Malignant neoplasm, uterus	1	-	1
Malignant neoplasm, prostate	1	1	-
Other malignant neoplasms	20	11	9
Diabetes mellitus	2	1	1
Anaemias	1	-	1
Meningitis	1	1	-
Other diseases of nervous system, etc.	3	3	-
Chronic rheumatic heart disease	1	-	1
Hypertensive disease	3	1	2
Ischemic heart disease	57	43	14
Other forms of heart disease	9	1	8
Cerebrovascular disease	31	9	22
Other diseases of circulatory system	14	4	10
Influenza	1	-	1
Pneumonia	20	10	10
Bronchitis and emphysema	7	6	1
Peptic ulcer	1	1	-
Intestinal obstruction and hernia	1	-	1
Other diseases of digestive system	1	-	1
Nephritis and nephrosis	1	1	-
Hyperplasia of prostate	1	1	-
Other diseases, Genito-urinary system	1	-	1
Congenital anomalies	3	2	1
Symptoms and ill defined conditions	2	1	1
All other accidents	2	1	1
Suicide and self-inflicted injuries	1	1	-
All other external causes.	1	-	1
Total all causes	<u>210</u>	<u>109</u>	<u>101</u>

NOTIFICATIONS OF INFECTIOUS DISEASES

Measles	171
Whooping cough	18
Scarlet fever	4
Tuberculosis	1
Infective jaundice	1
Sonné dysentry	1
Acute encephalitis	1

TUBERCULOSIS

	<u>Males</u>		<u>Females</u>		<u>TOTAL</u>
	<u>Pul.</u>	<u>Non-pul.</u>	<u>Pul.</u>	<u>Non-pul.</u>	
Number of cases on register at 1.1.69	57	9	29	11	106
Number of cases added during year	1	-	1	1	3
Number of cases removed during year	3	1	5	2	11
Number of cases on register at 31.12.69	55	8	25	10	98

Cases added to register

New notifications	2
Inward transfers	1
	<u>3</u>

Cases removed from register

Recovered	9
Died	-
Removed to other areas	2
	<u>11</u>

REPORT OF THE PUBLIC HEALTH INSPECTOR

FOR THE YEAR 1969

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present my Annual Report for the year 1969.

The District continues to prosper with increases in population and inhabited dwellings and on the industrial estates businesses are beginning to flourish. The Rateable Value of the District has increased by £56,144 which shown as a percentage is more than 9%.

The cold store and freezing factory on the Oulton Industrial Estate is expanding rapidly. The warehouse handles containerised foodstuff from many parts of the world and it is in fact bringing "Port Health work" inland. Bacteriological sampling of suspect food has to be undertaken in conjunction with the Public Health Laboratories and in cases of certain foods, co-operation with the veterinary officers of the Ministry of Agriculture, Fisheries and Food is required. Agreement and co-operation with the Company has been formulated after some initial problems had been ironed out and a very satisfactory working agreement of inspection and sampling is in operation.

The work carried out by the manual staff and Mr. Burch, the General Foreman, operating the Cleansing, Sewerage and Rodent Control services deserves a special mention. These men carry out their work under all conditions - rain, wind and heat waves. The preliminary work study carried out on the services by the staff of the East Suffolk County Council at the end of the year indicated the high efficiency at which they were working. I would like to add that their general approach to the public is particularly appreciated.

The terms of the lease on a new refuse tip at Camps Heath, Oulton was agreed during the year. Had this not been agreed and aquired, considerable expense could have been involved in the disposal of refuse by other methods such as pulverisation or incineration. Dumping of litter and rubbish in the countryside is still a problem. Large receptacles where people could dispose of their rubbish themselves had been constructed at three parishes but the areas surrounding became so littered with rubbish and then set on fire at various times that these areas had to be tidied up and the receptacles removed. Rubbish may now be dumped at the refuse tips when the tip operator is able to deal with it properly.

Again I would like to take this Oportunity to express my aprecciation to the members of my staff for their whole-hearted support throughout the year and for the way that they have helped the department to run smoothly and efficiently. May I also include Dr. Gee, Mr. Allen and the staff of the other departments who have given their help and advice whenever requested.

I should also like to express my thanks, particularly to Mr. Newson and Mr. Stirling, last year's chairman and vice-chairman of the Public Health Committee, for their support at all times and to you, Mr. Chairman and members, for the interest taken in the work of the department.

I am, Mr. Chairman, Ladies and Gentlemen,

Your obedient Servant,

G.J.L. HORNE,

Chief Public Health Inspector.

SUMMARY OF VISITS AND INSPECTIONS

Meat Inspection	556
Moveable Dwellings	114
Food Hygiene and Ice Cream	234
Offices, Shops and Railway Premises	48
Rodent Control and Pests	36
Cleansing	481
Sewage	552
Water Supplies	59
Housing (all visits)	328
Nuisances	102
Public Conveniences	95
Clean Air Act	10
Factories	25
Petroleum	58
Swimming Pools	91
Offensive Trades and Scrap Metals	26
Miscellaneous	91
Infectious Diseases	5
Oil Pollution	75
Agriculture	12
Animal Boarding Kennels	7
Knackers Yards	2
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HOUSING

199 dwellings were inspected during the year which resulted in the following action:-

Number of houses demolished and unfit houses closed:	15
Number of families re-housed:	7
Number of houses rendered fit after service of formal notices under the Housing Act, 1957:	28
Number of Demolition Orders made:	-
Number of Closing Orders made:	7

Owners of occupied houses and to a lesser degree tenanted properties are taking advantage of grant aid to improve property and the present attractive conditions are minimising the need to represent houses as unfit since what could have been regarded as unreasonable expense has now become more reasonable. It is also possible for many of the older properties in the district to connect to a sewer.

The continuing survey of houses in the district reveals changes in ownership and occupation or deterioration in conditions. The problem of dealing with many cottages today is the fact that the site is often regarded as more valuable than that of the property occupying it and a Housing Act Order is regarded with favour by the owner.

There were 505 applications on the Housing List at the end of the year, an addition of 16 from the previous year. 6 new dwellings were let and the number of existing dwellings relet and transfers made during the year was 35.

Advances made by the Council under the Housing Acts amounted to £13,000.

Provision of New Housing Accommodation

Houses erected by private enterprise:	273
Houses erected by the Local Authority:	6

Improvements to Houses

Number of dwellings in respect of which improvements were carried out with grants:

Discretionary Grants:	34
Standard Grants:	19
Council Houses modernised during 1969:	17

MOVEABLE DWELLINGS

Number of licenced sites:	64
Number of caravans used as permanent dwellings:	186
Number of caravans used for holiday accommodation:	2,660

Regular visits were made to the main sites and generally conditions were found to be satisfactory. All residential sites were visited with the Fire Prevention Officer during the year.

FOOD PREMISES

There has been little change in the satisfactory standard of hygiene in food premises and the interest shown by certain sections of the trade in good food hygiene is gratifying. The large kitchens at Holiday Camps received regular inspections and at the beginning of the season there appeared to be a deterioration in the standard of dining room staffs and an improvement in the kitchen staff. The problem of obtaining good staff does not improve in the seasonal establishments and the state of hygiene depends so much on the type of person available to the employers. Unfortunately the best type of person is usually employed whole-time.

The course of lectures at the Lowestoft College of Further Education was not a great success since it attracted only those who already understood the cause and not those who would have benefited most by them.

Speakers, in addition to Dr. Gee and my own staff, were my colleagues from Lowestoft Borough and Mr. R. Law, East Suffolk County Council. Films were provided by commercial companies and the Central Film Library.

It is not the intention to repeat this exercise although I do believe that catering staff should be required to attend something of this nature before taking up employment.

Food is processed by rapid freezing and warehoused at sub-zero temperatures at the cold store of Messrs. Chr. Salvesen and work is in hand to increase the warehousing space to six million cubic feet.

234 inspections were made to the following 208 food premises in the district.

Grocers and General Stores:	86
Butchers:	10
Fishmongers (wet or fried):	8
Greengrocers:	1
Sweets and confectionary:	9
Baker and confectionary:	4
Licensed premises:	58
Restaurants and cafes:	23
Canteens:	6
Warehouses:	3

Premises registered under the Food and Drugs Act, 1955

Ice-cream manufacturers:	1
Ice-cream retailers:	71
Sausage and preserved food manufacturers:	9

WATER SUPPLIES

The East Anglian Water Company are the undertakers supplying water in the Rural District from the following works:-

- a. Lound where the water is obtained from lakes which are fed from the surrounding gravels;
- b. Barsham where the water is obtained from the chalk.

It is estimated by the water company that approximately 300 million gallons were supplied to the district during the year and that the quantity of water produced within the district at Lound during 1969 was 737,439,000 gallons.

The fluoride content of the water is low and although this varies slightly the figure is in the order of 0.25 parts per million.

Specimen copies of analyses of Barsham Bores (treated water) and Lound Waterworks are shown at the end of this Report.

The results of samples taken from domestic supplies and submitted to the Public Health Laboratories at Norwich and Ipswich were as follows:-

	<u>Mains supply</u>	<u>Private wells</u>
Unsatisfactory	-	5
Satisfactory	1	11

Six samples were submitted to the Public Analyst for examination for nitrate content and one for chemical examination:-

<u>Nitrate</u> - private wells	Safe	4
	Doubtful	1
	Unsafe	1
<u>Chemical</u>	Safe	1

The following is a list of the dwellings supplied with mains water:-

<u>Parish</u>	<u>Direct Connections</u>	<u>Standpipes</u>
Barnby	76	11
Belton/Browston	456	-
Benacre	11	3
Blundeston	358	-
Bradwell	1,320	9
Burgh Castle	145	16
Wangford	175	11
Carlton Colville	875	-
Corton	333	5
Covehithe	1	7
Flixton	13	4
Frostenden	64	11
Easton Bavents	-	-
Gisleham	110	12
Henham	6	-
Herringfleet/St. Olaves	73	-
Hopton-on-Sea	266	-
Hulver/Henstead	89	9
Kessingland	1,027	13
Lound	98	-
Mutford	68	4
Oulton	86	-
Reydon	674	-
Rushmere	16	-
Wrentham	224	43
Somerleyton	115	-
South Cove	30	10
Uggeshall	26	10

SWIMMING POOLS

There were 17 swimming pools in the district and one in course of construction at the end of the year. The water was tested regularly for free and combined chlorine and for pH value.

A meeting of Pool operators was organised in May and although poorly attended a further meeting was requested for the winter. The value of this sort of meeting helps to achieve some uniformity in the standard of pool water.

RODENT CONTROL

	<u>Non-agricultural</u>	<u>Agricultural</u>
Total number of properties inspected following notification:	546	53
Number infested by - rats:	366	43
mice:	41	-
Total number of properties inspected for rats and/or mice for reasons other than notification:	1,100	35
Number infested by - rats:	163	10
mice:	8	-

The two operators continued to carry out this service. Wasps were prevalent during the exceptionally hot summer and many nests were destroyed by the operators during this period.

SLAUGHTERHOUSES

There are three licenced slaughterhouses and fifteen licenced slaughtermen in the District. All carcasses and offals were inspected and the condemned meat was processed at the Suffolk Fat and Bone Company's factory at Oulton. A charge on the slaughterhouse operators as prescribed by the Regulations was made for this inspection service amounting to £414. 5s. 3d.

	<u>Cattle:</u>	<u>Cows:</u>	<u>Calves:</u>	<u>Sheep:</u>	<u>Pigs:</u>
Number of animals killed and inspected:	1393	85	14	44	3504
<u>Diseases other than T.B. and Cysticercosis:</u>					
Number of whole carcasses condemned:	-	-	-	-	7
Number of carcasses of which some part or organ was condemned:	275	66	1	-	311
<u>Tuberculosis only:</u>					
Number of whole carcasses condemned:	-	-	-	-	-
Number of carcasses of which some part or organ was condemned:	-	-	-	-	39
<u>Cysticercosis:</u>	There were no cases found during the year.				

The total weight of meat and offals condemned amounted to 3 tons 1 cwt. 1qr

FACTORIES ACT, 1961

<u>Premises</u>	<u>Number on Register</u>	<u>Inspections</u>
Factories in which Sections 1, 2, 3, 4, 6 and 7 are to be enforced by the Local Authority:	7	2
Factories not included above in which Section 7 is enforced by the Local Authority:	44	23

There are no factories in the District employing outworkers although a small amount of outwork is carried out for factories outside the District.

CLEAN AIR ACT, 1956

The two brickworks in the District registered with H.M. Alkali Inspector were inspected during the year and both are unlikely to give rise to smoke nuisances.

PETROLEUM

66 annual licences were issued for the storage of petroleum spirit and all remaining petrol tanks over 20 years old were pressure tested with nitrogen. All new petrol tanks and suction lines were tested and electrical test certificates obtained where provision or alteration to wiring had been carried out. It is required that all future licences and renewals must be accompanied by an electrical test certificate.

OFFICES, SHOPS AND RAILWAY PREMISES ACT, 1963

The following premises were registered under this Act:-

Offices:	25
Shops:	46
Catering Establishments:	10
Fuel Storage Depots:	-

The number of inspections made in the year was 48.

AGRICULTURE (SAFETY, HEALTH & WELFARE PROVISIONS) ACT, 1956

12 visits were made to agriculture holdings during the year. Sanitary accommodation was provided at one farm at the request of the department.

REFUSE COLLECTION AND DISPOSAL

Staffing during the summer holiday period caused some difficulty. Casual labour was necessary to maintain the collection service but the men available were far from satisfactory and two had to be sacked.

A feasibility study was carried out by the East Suffolk County Council at the end of the year in order to assess the possibility of introducing a bonus scheme related to productivity. The report was received in 1970.

Two new vehicles were purchased in the spring. These helped to maintain the service required by the continuing increase in population of the District.

The table below gives details of the vehicles and the tonnage collected.

		<u>Year</u>	<u>Capacity</u>	<u>Mileage</u>	<u>Diesel Fuel used</u>	<u>M.P.G.</u>
Bedford/Eagle	XRT 351G	1969	35 cu.yd.	4,788	839 gls.	5.7
Dennis Paxit IIIC	XBJ 495G	1969	35 cu.yd.	5,583	959 gls.	5.8
Bedford/Eagle	TBJ 872F	1968	35 cu.yd.	10,533	1,414 gls.	9.2
Karrier/Eagle	NBJ 694E	1967	50 cu.yd.	9,445	1,472 gls.	6.4
Bedford/Eagle	DBJ 509C	1965	50 cu.yd.	6,039	965 gls.	6.2
Shelvoke & Drewry	401 LBJ	1962	25 cu.yd.	3,208	349 gls.	9.1

The vehicles collected 1,476 loads estimated at weighing 7,370 tons.

CESSPOOL EMPTYING

The two vehicles removed 5,257,000 gallons of sewage and sludge which was disposed of at Ness Point, farm land and some into the sewers. £771 was received for this service from business and other premises.

		<u>Year</u>	<u>Capacity</u>	<u>Mileage</u>	<u>Diesel Fuel used</u>	<u>M.P.G.</u>
Karrier/Yorkshire	PRT 745F	1967	1,000 gls.	20,323	1,489 gls.	13.6
Karrier/Yorkshire	308 URT	1964	1,000 gls.	15,396	1,216 gls.	12.6

SEWERAGE

Maintenance of the sewers, works and pumping stations was carried out by two fitters, three works attendants and four part-time pump attendants. Two more men were employed on general maintenance and grass-cutting.

The Somerleyton, Herringfleet and Fritton scheme came into operation in the Autumn. The old unsatisfactory works serving Somerleyton is now disused and the old sewers are used for surface water where suitable. The new scheme includes the works, two pumping stations, two diverters and one ejector station together with approximately seven miles of sewers and rising mains.

A small scheme to pump sewage from Rogerson Hall Holiday Camp, Corton was also commissioned in the Spring. This dispensed with the old private disposal plant which had caused nuisances in the past.

Further sewerage schemes were considered to provide main drainage in the Parishes of Burgh Castle, Hulver and Camps Heath. Extensions to existing schemes found to be necessary due to increased flows were also proposed at Pontins Holiday Camp and Hopton-on-Sea.

Alterations to provide a rising main to Wrentham Works with a pump at Frostenden was agreed, the old disposal system being inadequate.

The table below gives details of the various schemes within the District.

<u>Parish</u>	<u>Pumping Stations</u>	<u>Ejector & Diverter Stations</u>	<u>Disposal</u>
Bradwell	1	-	Gt. Yarmouth sewer
Belton/part Burgh Castle	4	-	Gt. Yarmouth sewer via Bradwell pumping station
Hopton-on-Sea	1	2	Gt. Yarmouth sewer
Lound	1	-	Gt. Yarmouth sewer via Hopton pumping station
Blundeston	1	2	Corton Disposal Works
Corton	2	1	Corton Disposal Works
Barnby	1	-	Worlingham Disposal Works (Wainford R.D.C.)
Mutford	1	1	Worlingham Disposal Works via Barnby pumping station
Carlton/part Gisleham	2	-	Lowestoft sewer
Gisleham	1	-	Kessingland Disposal Works
Kessingland	3	-	Kessingland Disposal Works
Wrentham/part South Cove	2	1	South Cove Disposal Works
Frostenden	1	-	Frostenden Disposal Works
Wangford	1	1	Wangford Disposal Works
Reydon	3	-	Southwold Disposal Works
Somerleyton, Fritton & Herringfleet	2	3	Somerleyton Disposal Works

PUBLIC CONVENIENCES

The three conveniences sited at Hopton, Corton and Kessingland were used extensively during the holiday season. Routine cleansing and maintenance was carried out by the part-time attendants and the full-time staff.

A public convenience on the A12 Trunk Road at Frostenden was agreed for completion by the summer of 1970.

BEACH POLLUTION

The pollution of beaches continues to pose a problem, not only from major oil slicks breaking up but also from apparent widespread smaller quantities coming ashore and contaminated plastic and other debris.

A bulldozer was hired to turn over contaminated areas of shingle and sand on a trial basis at Kessingland and Corton. This was only partially successful as some of the oil previously buried was then exposed.

PLEASURE BOATS

There were three pleasure boats and three boatmen licenced under the Public Health Acts Amendment Act, 1907. The boats were inspected and the safety provisions were satisfactory.

THE COUNTIES PUBLIC HEALTH LABORATORIES

Thresh House,
Verulam Street,
Gray's Inn Road,
London, W.C.1.

ANALYSIS OF A SAMPLE OF WATER received 15.10.69. Our ref: Y/M/680
from EAST ANGLIAN WATER COMPANY

Labelled Kitchen tap, 163 High Street, Lowestoft. Date: 15.10.69, 10.35a.m.

Taken by J. Syme Witness S. Barrett Signed J. Syme

CHEMICAL RESULTS IN MILLIGRAMS PER LITRE (ppm)

Appearance: Clear and bright.

Turbidity (A.P.H.A. units): Nil

Colour (Hazen): 5 Odour: Nil

pH: 7.3 Free Carbon Dioxide: 15

Electric Conductivity: 540 Dissolved Solids dried at 180°C: 375

Chlorine present as Chloride: 54 Alkalinity as Calcium Carbonate: 125

Hardness: Total: 230 Carbonate: 125 Non-carbonate: 105

Nitrate Nitrogen: 3.8 Nitrite Nitrogen: Absent

Ammoniacal Nitrogen: 0.00 Oxygen Absorbed: 0.60

Albuminoid Nitrogen: 0.10 Residual Chlorine: 0.02

Metals: Iron, Zinc, Copper, Lead: Absent

BACTERIOLOGICAL RESULTS

Sampling bottles are treated to remove residual chlorine if present

Number of colonies (1 day at 37°C. 2 days at 37°C. 3 days at 20-22°C
developing on Agar (0 per ml. 2 per ml. 3 per ml.

	<u>Present in</u>	<u>Absent from</u>	<u>Most probable no:</u>
<u>Presumptive Coliform reaction:</u>	- ml	100 ml	0 per 100 ml
<u>Bact. coli. (Type 1):</u>	- ml	100 ml	0 per 100 ml
<u>Cl. welchii reaction:</u>	- ml	100 ml	

This sample is clear and bright in appearance, neutral in reaction and free from metals. The water is hard in character but its hardness and its content of mineral and saline constituents in solution are not excessive. The organic quality and bacterial purity of the water are of a high standard.

These results indicate a pure and wholesome water suitable for drinking and domestic uses.

(signed) Roy C. Hoather.

27th October, 1969

THE COUNTIES PUBLIC HEALTH LABORATORIES

Thresh House,
Verulam Street,
Gray's Inn Road,
London, W.C.1.

ANALYSIS OF A SAMPLE OF WATER received 19.11.69. Our ref: Y/P/592
from EAST ANGLIAN WATER COMPANY

Labelled Stradbroke Road tower, Lowestoft. Date: 19.11.69, 10.50a.m.

Taken by J. Syme Witness D. Hood Signed J. Syme

CHEMICAL RESULTS IN MILLIGRAMS PER LITRE (ppm)

Appearance: Faint opalescence with no visible deposit.

Turbidity (A.P.H.A. units): 1.0

Colour (Hazen): 5 Odour: Nil

pH: 7.5 Free Carbon Dioxide: 15

Electric Conductivity: 700 Dissolved Solids dried at 180°C: 500

Chlorine present as Chloride: 52 Alkalinity as Calcium Carbonate: 230

Hardness: Total: 350 Carbonate: 230 Non-carbonate: 120

Nitrate Nitrogen: 0.9 Nitrite Nitrogen: less than 0.01

Ammoniacal Nitrogen: 0.00 Oxygen Absorbed: 1.00

Albuminoid Nitrogen: 0.03 Residual Chlorine: 0.02

Metals: Iron, zinc, copper, lead, manganese: Absent

BACTERIOLOGICAL RESULTS

Sampling bottles are treated to remove residual chlorine if present

Number of colonies (<u>1 day at 37°C.</u>	<u>2 days at 37°C.</u>	<u>3 days at 20-22°C.</u>
developing on Agar {	<u>0 per ml</u>	<u>0 per ml</u>	<u>7 per ml</u>

	<u>Present in</u>	<u>Absent from</u>	<u>Most probable no:</u>
<u>Presumptive Coliform reaction:</u>	- ml	100 ml	0 per 100 ml
<u>Bact. coli. (Type 1):</u>	- ml	100 ml	0 per 100 ml
<u>Cl. welchii reaction:</u>	- ml	100 ml	

This sample is practically clear and bright in appearance, has a reaction slightly on the alkaline side of neutrality and is free from metals. The water is very hard in character but its hardness and its content of mineral and saline constituents in solution are not considered excessive. Its organic quality and bacterial purity are of a high standard.

These results indicate a pure and wholesome water suitable for public supply purposes.

(signed) Roy C. Hoather

2nd December, 1969

